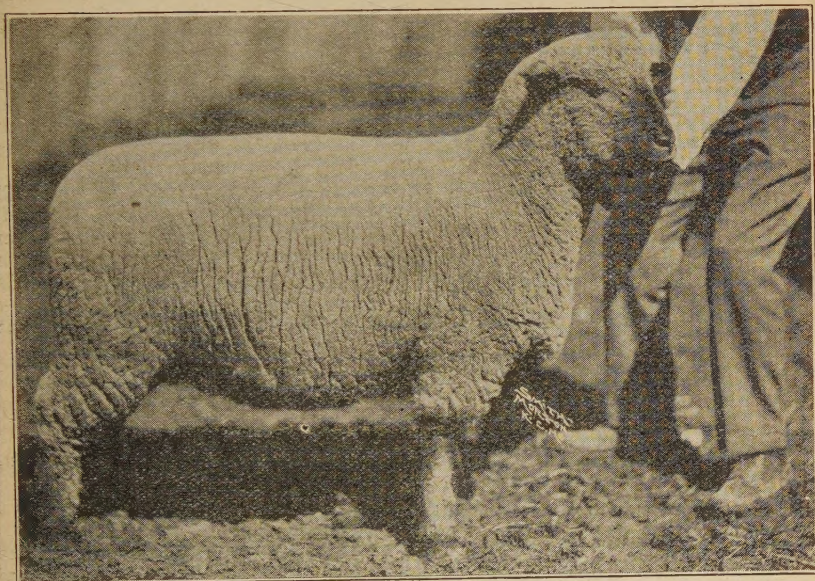


OKLAHOMA
AGRICULTURAL AND MECHANICAL COLLEGE
AGRICULTURAL EXPERIMENT STATION
ANIMAL HUSBANDRY DEPARTMENT
STILLWATER, OKLAHOMA

SHEEP

CARE AND MANAGEMENT

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A Good Mutton Type

Circular No. 58

Sheep---Care and Management

Sheep husbandry offers some very attractive opportunities to Oklahoma farmers. A small flock of sheep on the average Oklahoma farm will add materially to the farm income. A small flock of twenty-five ewes can be kept on the farm with very little extra expense and will furnish a steady income.

Sheep will eat about 90 percent of the weeds common to Oklahoma and hence will get a large part of their feed from what would otherwise be waste and even worse, a distinct detriment to the farm. Sheep will clean the weeds and underbrush out of the pasture and weeds out of waste corners, fence rows, etc.

There has been so much said about sheep as scavengers that some farmers have the mistaken idea that sheep need no feed or care. Sheep need careful attention but at the same time will improve the appearance of the farm and secure a greater part of their feed from waste than any other class of livestock.

Sheep raising in Oklahoma should be chiefly on the small farm flock basis and therefore we recommend that the farmer start with a flock of twenty to fifty ewes and the average farmer should never increase his flock to more than 100 head. One thing in favor of sheep is that they are a money making side-line, but when the flock gets beyond 100 ewes they will either cease to be a side-line or cease to be profitable.

P. H. Lowery, livestock specialist of the Extension Division, Oklahoma A. and M. College, collected some data on a number of farms carrying sheep. These farms are in all sections of the state and the summary which follows offers some very good argument in favor of sheep on Oklahoma farms.

The following report may not be correct in every respect, as one will note practically fifty percent of the demonstrators made no charge for feed. (Interest on money invested was not charged, neither was any deduction made for depreciation). The contention was that the small farm flock on the average farm in Oklahoma would pay for its feed bill in various weeds eaten.

"1. On January 1, 1923, 30 demonstrators had 3617 ewes valued at \$22,765.00.

"2. Lamb crop 3115, value \$21,853.28.

"3. Wool clip, 23,477 pounds, value \$8,450.45.

"4. Feed charge, \$3,671.20.

"5. Gross profit, \$26,828.53."

—Annual report of P. H. Lowery, Livestock Specialist, Extension Division, Oklahoma A. and M. College.

Selection of Ewes

In selecting ewes one should decide whether he is to start with grades or purebreds. We recommend grades to the beginner because a mistake resulting in losses is less serious if made on relatively cheap grade ewes than if made on the more expensive purebreds.

If purebreds are selected the things to consider are: purpose of flock, personal preference, and the breeds that are common to your locality and state. The most desirable breed in Oklahoma will probably be one of the medium wool mutton types of which the following are representatives: Shropshire, Hampshire, Southdown, Oxford, Dorset, Suffolk and some less important breeds.

The fine wool type of sheep enjoy a deserved popularity in the west where they are handled in large flocks. There is a great number of these sheep in Texas and they will undoubtedly gain in favor in western and southwestern Oklahoma. Of the two breeds representing this type (Merino and Rambouillet) the Rambouillet is generally preferred because it is larger and a better producer of market lambs than the Merino.

Grade ewes can be bought locally on the livestock markets. Where ewes can be bought locally with a fair degree of knowledge as to their health, freedom from parasites, etc., this practice is to be recommended. When it is necessary to go a considerable distance from home and ship ewes in, the best place to go is to a livestock market. One hundred or one hundred and twenty ewes will make a carload and the freight per head will be reduced by buying with some neighboring farmer. Any reliable livestock commission firm will make satisfactory purchases on description and it will be unnecessary for the buyer to go to the market.

When buying on the market it is always advisable to buy western ewes as they are usually much more free from stomach worms and other parasites. Most western ewes carry considerable Merino or Rambouillet blood but it is possible to secure black faced ewes of "down" breeding if desired.

In selecting these ewes examine each one closely. They should have good mutton form, a good set of teeth, a sound udder, and lots of vitality.

Breeding Season

Lambs should all be dropped before the first of April which means all the ewes should be bred before November 1st.

The ewes should be in good thrifty condition and if possible gaining at breeding time. This condition known as "flushing" is best brought about by furnishing the ewes some good green pasture but can be accomplished by simply increasing the ration they are receiving, adding alfalfa hay or turning into stalk fields, feeding silage or anything that tends to tone up the system and cause the ewes to gain in flesh.

The ram may need a little special attention and feed during the breeding season as this is his work period. A feed of oats and bran at night will generally take care of this satisfactorily. A ram in good breeding condition should take care of 30 to 40 ewes if he remains with the flock all the time; however, if he is allowed with the ewes for a short time each day he may serve 50 to 60 ewes in one breeding season.

Shelter and Equipment

The shelter for sheep need not be expensive but care and thought are necessary in planning and locating a shelter. The ewe requirements of a shelter in Oklahoma are that it be dry and furnish a windbreak. No special effort need be made to insure warmth, because a sheep that is kept out of the wind and kept dry rarely suffers from the cold. Dirt floors are the cheapest and most satisfactory for sheep. Allow 12 to 14 square feet of floor space for mature ewes and 5 to 7 square feet for lambs.

The shelter should be placed on a well drained piece of ground as sheep are subject to foot trouble when they are forced to remain in mud or soft manure for a long period of time.

The hay rack for feeding sheep should be so constructed that the hay is pulled between slats about four inches apart to avoid chaff falling into the wool. The grain troughs should have a flat bottom and be fixed so the sheep cannot get into them. A good arrangement is to have the grain troughs in connection with and just below the hay rack.

Wintering the Bred Ewes

The success or failure of sheep will depend largely on the feed and care of the ewes during the winter months.

The wheat, rye, or barley pasture recommended for ewes during the breeding season is excellent for starting them into the winter periods. While the ewes are on good rye or barley pasture they will require nothing in addition except a small feed of hay, preferably alfalfa, each night. Care should be taken in keeping the ewes in fair flesh as flesh lost at this time is expensive to regain.

After the rye or barley pasture becomes short it is often possible to allow the ewes the run of the farm, getting the forage standing in the field and the grain that was missed at harvest time. The ewes should not require any additional feed at this time but should be watched closely and when the fields get well picked over they should be given some additional feed. Under Oklahoma conditions it is rarely possible to depend on the fields after January 1st. When ewes are placed on harvested feeds care should be taken to see that they get plenty of exercise. A run of the fields though well picked over is desirable at this time.

When ewes are in good condition receiving good quality alfalfa or cowpea hay the grain ration can be materially reduced and sometimes eliminated entirely. The condition of the ewes should be the guide followed in feeding as the ewes should be in good condition at lambing time.

Rations for Wintering Breeding Ewes

Ration 1—

Pasture

2 to 3 lbs. alfalfa hay

Ration 3—

$\frac{1}{2}$ lb. oats

2 to 3 lbs. alfalfa hay

Ration 2—

2 parts oats

1 part bran

$\frac{1}{2}$ lb.

Ration 4—

$\frac{1}{2}$ lb. corn

$\frac{1}{8}$ lb. linseed oil meal

3 lbs. cane or sudan hay

Any of the grain sorghums or barley can be used instead of corn. Always have pasture in winter if possible—also feed some legume hay such as alfalfa, cowpea, clover— $\frac{2}{3}$ lb. of silage is as good as 1 lb. of hay.

Ewes should be brought to lambing season in fairly good flesh as this will insure well developed, strong lambs, a good milk flow from the ewe, and lessen the number of disowned lambs. A day or two before the ewe is to lamb she should be removed from the rest of the flock and placed in a small pen (4 ft. by 4 ft.) in part of the shed and the grain ration if heavy reduced and part of it replaced by bran. Reducing the grain reduces the danger of fever or udder trouble at lambing.

A ewe that lambs in the pasture with the flock may leave her lamb and follow the flock. A lamb is very easily chilled especially before it has had a feed of its mother's milk.

After lambing the ewe should be brought back to a grain ration as soon as possible without causing digestive troubles for the lamb. Any kind of green pasture at this time is excellent. Silage is very good in the absence of sufficient pasture. A good guide for the grain ration is feed ewes for milk production as you would feed a cow.

Young Lamb Troubles

Chilled lamb: A lamb that is weak or for any reason fails to get a feed of its mother's milk soon after birth is very easily chilled. A chilled lamb has the recuperative powers of a "drowned" young chicken, so never give up until everything has been done to revive the lamb. A lamb only slightly chilled can be brought around by being warmed well at a fire and getting a feed of milk. A lamb that is very badly chilled, apparently dead, can often be revived by putting in water as hot as the elbow can stand and when circulation is restored rubbing dry and proceeding as above.

Scours: Reduce the feed of the ewe and give the lamb a small dose of oil.

Constipation: Can ordinarily be cured by a small dose of oil, but when caused by a small ball of wool in the intestines, treatment is usually of no avail. Lambs get wool in the stomach by sucking a piece of wool instead of a teat and more rarely by nibbling at wool. This trouble generally occurs in very young lambs only.

Disowned lambs: A ewe may disown her lamb for any reason or for no apparent reason whatever; however, it is generally because a lamb, sometimes one of twins, is too weak to follow, because the ewe is young or for some reason, generally poor feeding, has a scant milk supply.

A ewe refusing to own her lamb or lambs if she has twins can often be induced to take the lambs after being held while the lambs nurse the first few times. Some shepherds recommend putting a dog in the pen next to the ewe and lambs. If the dog can be made to bark the ewe will protect the lambs and thereafter claim them.

An orphan lamb can often be given to a ewe that has lost her lamb by skinning the dead lamb and putting the skin on the orphan. The ewe recognizes the smell of her own lamb from the pelt and gradually becomes accustomed to the lamb and the skin can be removed in a day or two. Orphan lambs can be raised on cow's milk by hand feeding but in the case of grade lambs they are seldom worth the extra work required.

Shearing Time

Sheep in Oklahoma should be sheared in March or the first part of April, depending on the weather. When left unsheared until May, as many farmers do, wool seems to lose some of its "life" and some think it fails to grow during the last month or six weeks. At least it makes the sheep uncomfortable and in this way is a detriment when left on the sheep's back too long.

Before shearing, all the dirty locks (1) of wool should be removed from the rear of the sheep first and the shearing should be on a canvas or clean floor to avoid getting foreign matter such as chaff, etc., into the wool. After the wool is removed it should be gathered together, skin side out, and tied with paper wool twine (2), tying each fleece separately. The wool may be tied loosely or placed in a wool box and tied into a more compact bundle. Using the wool box requires more twine and time but is to be preferred to the other method unless one is adept at tying without the help of the wool box (3.)

Wool should be placed in wool bags for shipping or storage. The bags come in various sizes but a 7½ ft. bag costing 75 cents, will hold 200 to 275 lbs. of wool when well packed. An average clip for Oklahoma wool is 7 to 8 pounds per head, so one bag will probably hold the wool taken from a flock of 25 ewes. If wool is stored, be sure it is in a dry place. Dip the sheep after shearing with Kreso dip, mixed according to directions on container.

Docking and Castrating Lambs

The tail should be removed at the second joint from the body. This may be done with a sharp knife or any one of a number of docking irons.

Lambs should be docked when they are about 10 days old and all ram lambs not to be saved for stud rams should be castrated at the same time.

In castrating remove about one-half inch from bottom of scrotum and pull testicles out. A little disinfectant and the operation is complete.

The docking irons are usually dull shears that are heated to a red heat

1. These locks are called tags.
2. Always use paper twine and if unable to secure it locally write Animal Husbandry Department, Oklahoma A. and M. College, Stillwater, Okla.
3. Secure directions for making wool box from county agent or College, Stillwater, Okla.

and the tail cut and burned off. This sears the stub end and prevents bleeding and is to be recommended when the lambs are a month or two old and the tails large. The same purpose can be accomplished by tying a string tightly around the tail and removing tail below the string but this must later be removed and hence means more work. The danger of bleeding to death is slight if docking is done while lambs are small and in the morning before the lambs exercise and cause the blood to flow freely. The Texas station got better results when docking was done with a sharp knife and not seared than when done with a docking iron or seared.

The Kentucky station has collected some valuable data on the advantages of docking and castrating market lambs.

Growing the Lamb

One of the best and cheapest ways to feed a lamb through the ewes is to feed the ewe a ration that will insure a large milk flow and one of the best ways to do this is to have her on good pasture such as barley, wheat or rye. The grain ration should be fairly high in protein and mineral and rather bulky. Oats and wheat bran are excellent feeds at this time. The hay should preferably be legume such as alfalfa or cowpea.

It is almost impossible to give a definite amount that should be fed a ewe but her condition is a pretty safe guide. If she is receiving good pasture, she will probably need very little or no grain but should receive some leguminous hay.

Some Suggested Dry Lot Rations

Ration 1—

$\frac{1}{2}$ corn
 $\frac{1}{2}$ oats
 $\frac{1}{2}$ to 1 lb.

Ration 3—

Shelled corn $\frac{1}{2}$
 Whole oats $\frac{1}{2}$
 $\frac{1}{2}$ to 1 lb.
 Silage, 2 to 3 lbs.
 Alfalfa hay, 2 to $2\frac{1}{2}$ lbs.

Ration 5—

Shelled corn, 5
 Whole oats, 5
 Linseed oil meal, 1
 Sudan hay, 3 lbs.

Ration 2—

Whole oats, $\frac{1}{2}$ to 1 lb.
 Alfalfa hay, 3 to 4 lbs.

Ration 4—(4)

Shelled corn, 5 parts
 Oats, 2 parts
 Wheat bran, 2 parts
 $\frac{1}{2}$ to 1 lb. grain
 Silage, 3 lbs.
 Alfalfa hay, 1 to $1\frac{1}{2}$ lbs.

Ration 6—

Shelled corn, 5 parts
 Wheat bran, 4 parts
 Alfalfa hay

Two or three pounds of silage will replace a pound of hay in the above rations. Any of the grain sorghums can be substituted for corn and any leguminous hay for alfalfa.

The amounts of grain fed will depend on the amount and kind of pasture being furnished and the number of lambs a ewe is nursing. The object should always be to produce a maximum milk flow at a minimum cost of feed bought. Linseed oil meal is generally more costly than that bought in wheat bran, oats, or corn, so should be avoided when a well balanced ration can be furnished without it.

Lambs will usually begin to eat grain when about two weeks old and should be encouraged to do so.

The lambs can be fed grain in addition to that fed the ewes by building a lamb creep—an enclosure with opening large enough for lambs to enter but not large enough for the ewes—and placing grain in a trough inside this creep. Lambs fed in this manner may receive all the grain they will clean up each day. This will range from very little at the beginning to

possibly three-fourths to one pound per day. When the lambs are four months old, they will probably average not over a half pound per day for the entire period.

Grain Rations for Suckling Lambs

(First three weeks)

Ration 1—

Ground corn, 2 parts
Bran, 2 parts

Ration 2—

Ground corn, 2 parts
Crushed oats, 2 parts
Linseed oil meal, 1 part

Ration 3—

Crushed corn, 2 parts
Crushed oats, 2 parts
Crushed bran, 1 part

The above are to be recommended until weaning in purebred flocks where growth is the end sought. Where lambs are to be marketed at weaning time the ration should contain more corn after first three or four weeks.

For Fattening

Ration 4—

Corn, 6 parts
Linseed oil meal, 1 part

Ration 5—

Corn, 2 parts
Crushed oats, 1 part

The ewes and lambs should be on some good green pasture until weaning time. A good rotation for furnishing pasture for ewes and lambs can be furnished by fall sown wheat, barley, or oats for early spring, followed by rape or Sudan grass for summer pasture.

Weaning and Marketing

Lambs can be weaned at from 4 to 5 months of age and should weigh at that time 65 to 80 pounds. This is the ideal time and weight at which to market lambs. By marketing early spring lambs at weaning time, they reach the market in late May or June when there are very few lambs being marketed, then too, they go to market fat and will always sell for a premium. In order to market lambs in good condition at this time, it is necessary to feed them grain as recommended above.

Lambs that are kept through the summer and sold in the fall or winter as must be done with late lambs, go to market in competition with the large western run and often poor in condition because of parasitic infestation discussed later. Lambs are rarely worth as much on the market as yearlings as they were at weaning time and the cost of production is much greater.

When lambs and ewes are separated, the ewe lambs to be retained in the flock should be put on good pasture and the ewes turned on rather poor pasture in order to dry them up with little trouble. After they are dry a run of wheat or oat stubble is good but permanent pasture is satisfactory, because when turned into the field in September they will begin to gain and be in ideal condition for breeding.

Internal Parasites

The most serious of the internal parasites is the stomach worm. The sheep becomes infested with stomach worms from the pasture.

The mature worm lives in the stomach of the sheep and lays eggs that are passed out and hatched on the outside of the body. After hatching and passing through a stage or two of development they crawl up on the blades of grass and are eaten by the sheep and the sheep are reinfested.

The most trouble is experienced from stomach worms during the summer months when the hot weather causes the eggs to hatch and worms to develop in a very short period. It is because of these that lambs at weaning time should not be pastured on a field that has had sheep on it during the spring preceding.

Symptoms.—Sheep that have stomach worms lose flesh and become listless. The wool becomes harsh and the skin pale. The eyelids and lips

generally showing color become yellowish. In advanced stages, a swelling appears under the jaw.

Stomach worms can be largely controlled by a rotation of pastures, changing the sheep from pasture to pasture about every two weeks. This is not always possible and where it isn't the sheep must be drenched. A successful drench recommended by Dr. J. Guberlet is as follows: (5)

"Copper Sulphate—Tobacco Drench"

"For treatment of small flocks, dissolve one ounce of copper sulphate in a quart of boiling water, one ounce of tobacco in a quart of boiling water; cover and let stand over night. In the morning mix the two solutions and add one quart of cold water. This makes a solution of the proper strength and is enough to drench 25 adult sheep or 50 lambs, allowing some for waste.

"In the preparation of the solution only clear-blue crystals of copper sulphate should be used. Crystals which contain soft white patches should not be used. Any kind of tobacco may be used provided that it has not been exposed too long. Plug tobacco may be used but in that case it must be finely chopped and before it is mixed with the copper sulphate solution, it must be strained through a cloth and all of the juice pressed out. Tobacco snuff is very satisfactory as it is not necessary to strain it before mixing with the blue-stone solution."

Great care should be taken that the solution be made the right strength. If the solution be made too strong serious results may follow. A solution that is not strong enough will not destroy the worms. It is absolutely necessary that all materials be weighed and measured accurately in making up the solution for drenching.

The doses to be given to lambs or sheep for either copper sulphate or copper sulphate and tobacco are the same as recommended by the United States Department of Agriculture which are:

For lambs under one year of age one and three-fourths ounce (50 cubic centimeters).

For sheep past one year of age, three and one-half ounces (100 cubic centimeters).

The treatment should be given on an empty stomach, if possible. As a rule it is best to keep all feed and water away from the animals the evening before the treatment is given and then administer the dose in the morning while they are empty. Feed and water should be kept away for at least two hours after treatment.

It is very important that the dose be administered very carefully. Carelessness may bring serious results. Care must be taken to see that the proper size dose is given. An over-dose may cause death while too small a dose will not produce results. Copper sulphate is poisonous, and like all medicines, is safest, and best results are obtained when in the hands of a competent veterinarian.

It is advisable to administer two treatments, three or four days apart. The observations at this laboratory have shown that in most cases a single treatment removes the most of the worms, but there are always a few animals in a flock that do not respond to treatment as readily as the rest. The second treatment should be given to get the few worms that are not removed by the first dose. The foregoing results show clearly that copper sulphate and tobacco are most effective in the removal of worms from sheep and should be used according to directions. The treatment is inexpensive and can be administered very easily with a small expenditure of time and labor.

If sheep become constipated, a small dose (1 to 2 tablespoonfuls) of castor oil or 1 to 2 ounces epsom salts in water will be sufficient for a lamb. For a mature sheep give 2 or 3 times these amounts.